ZOLTAN x HAJOS

Hungary/ Organic Chemistry - Theoretical and general questions on organic chemistry E-1

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11602

Author : XI. Csuros Zoltan, Hajos Zoltan, Deak Gyula.
XII. Csuros Zoltan, Fodor Jozsef, Hajos Zoltan.

Title : Investigation of Catalytic Reactions. XI. Role of Autoxidation Processes in Formation of Drying Oil Films. XII. Effect of Ion-Exchange Resins on Esterification Reaction.

Orig Pub : Katalizatoros vizsgalatok. XI. Autoxidacios folyamatok szerepe szarado olaj filmek kialakulasaban. XII. Ioncserelok hatasa eszterezesre. Magyar tudoman. akad. kem. tudoman, osztalyanak kozlemenyei 1953, 3, No 4, 469-485; 501-513 (Hungarian)

Abstract : Communication XI. It was ascertained that on autoxidation of C_6H_5CHO in $CHCl_3$ rate of O_2 absorption increases in the case of addition of the siccatives, naphthenates of Co (I) and Mn (II). In the case of large amounts of I or II amount of absorbed O_2 is greater. After absorption of a certain amount of O_2 the system reaches an equilibrium and further absorption of O_2 is not observed. On autoxidation of linseed

Card 1/5

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11602

oil (LO) in the presence of I or II peroxide value (PV) rises at first and then decreases. In the presence of I maximum PV is reached sooner than in presence of II. Highest value of maximum is associated with the use of definite, optimal, amount of siccative; in the presence of lesser or greater amount of siccative value of PV maximum decreases. Investigated were the variations of PV of LO on irradiation with diffused light, ultraviolet radiations and on heating at 140°. In the first mentioned case a slow linear increase of PV is observed. Under the action of ultraviolet radiations PV increases faster and reaches a definite maximum level. On heating an analogous maximum is reached still faster after which PV drops rapidly; in this case maximum value is lower than on irradiation with ultraviolet. Boiled oil prepared with the use of II, shows on irradiation with diffused light an increase in PV only after a prolonged induction period, after which PV rises sharply to maximum level and then decreases. On exposure to ultraviolet radiations PV of oil increases sharply to a maximum the value of which is higher than in the preceding instance; following the maximum PV drops

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11602

very rapidly. In this case the maximum is reached more rapidly than in the case of unboiled LO, and the process of decomposition of peroxides also occurs more rapidly than with LO. On heating at 140° very rapid decomposition of peroxides is observed in the boiled oil under study. In boiled oil PV maximum is attained considerably sooner than in the case of drying oil prepared in the cold with the same siccative as is used in the boiled oil, but in the latter instance the maximum PV level is much lower. During the initial period of drying of LO the chain process of autoxidation is playing a substantial part. As the drying progresses autoxidation becomes of subordinate importance and decomposition of peroxides sets in, which is probably associated with occurence of bond formation between activated molecules of the oil. This confirms the previously proposed mechanism of drying (Powers P.O. et al., Ind. Eng. Chem., 1951, 33, 1257). As concerns the mechanism of action of the siccatives, it was ascertained that they are capable of catalyzing the formation and the decomposition of peroxides.

Hungary/ Organic Chemistry - Theoretical and general questions on organic chemistry E-1

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11602

Communication XII. The reaction of phthalic anhydride with butanol was utilized to investigate the effect upon the reaction of esterification, of fractions of different degree of dispersion, of a cathion exchange resin of phenol sulfonic acid type, Wofatit KS. Activity of catalyst (amount of acid group titrated with KOH) increases with increasing degree of dispersion up to a certain limit after which increased degree of dispersion produces no appreciable effect on the activity. Velocity of reaction increases with increasing amount of catalyst up to a certain optimal amount; on use of greater anounts of catalyst velocity of the reaction decreases. On increase of the degree of dispersion of the catalyst its catalytic action (terminal degree of conversion) decreases except for those instances when a highly dispersed catalyst is subjected to activation after comminution. By means of ion-exchange resins it is possible to attain the same extent of conversion as with an equimolecular amount of H_2SO_4, but more slowly than with H_2SO_4.

Card 4/5

Hungary/ Organic Chemistry - Theoretical and general questions E-1
on organic chemistry

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11602

To activate the catalyst it is treated with dilute H_2SO_4 while stirring ($\sim 20^\circ$). Drying of the catalyst (60°) to constant weight has a detrimental effect on its catalytic properties, therefore it is used in air-dry condition.
Communication X see RZhKhim, 1955, 28809.

Card 5/5

Hajós, Zolt...

Inhibition of color fading. I. Zoltán Hajós and József Fódor. (Tech. Univ., Budapest). *Magyar Tudományos Akad. Kém. Tudományok Osztályának Közleményei* 5, 533–43(1955).—Based on correlation between the processes of autoxidation and of the fading of colors exposed to light, a similar mechanism was proposed for both phenomena. The presence of peroxides as an interim step is postulated for both processes. The scope of the paper is to investigate the behavior of dyes used on textile fibers. Color fading was induced by ultraviolet light in the Pulfrich photometer and measured in solns. with an alk. pH. For detg. inhibition of autoxidation, the gasometric O intake of BzH was measured. Several chemicals prevented color fading as well as autoxidation. Examples for the former with antioxidant qualities are: Naphthol AS-OL, Katanol W, and Indanthrene Olive Green B. Examples for the latter with antifading properties are: tritolyl phosphate, phosphoric acid, glucose, 2-naphthol, thiocarbamide, hydroquinone, pyrocatechol, resorcinol, and hydroquinone monobenzyl ether. Helen Sellei

(1)

HAJOS, ZOLTAN

Ion-exchange-resin catalyzed hydrolysis. József Fodor and Zoltán Hajós (Budapest Inst. Technol.). *Magyar Tudományos Akad. Kém. Tudományok Osztályának Közleményei* 5, 545–50(1955).—Wofatit KS, phenolsulfonic acid ion-exchange resin, proved an effective catalyst in hydrolysis of sucrose, the rate of reaction being affected by the degree of dispersion and the amt. of the resin. Without the catalyst the reaction does not proceed even at 96°. With the resin, rate is not discernible at 28°, the log of the reaction rate const. increasing almost linearly with temp. When an equiv. amt. of HCl is used as catalyst, the rate const. varies in the same way, but can be measured at 19.5°. The activation energy, with resin catalyst, increases with temp. up to a max. of 22.390 cal./degree at 80–90°, then drops abruptly to 9.980 cal./degree at 90–96°. With HCl the max. is 26.310 cal./degree at 60–80°, with 18.280 cal./degree at 80–90°.

Ludwig Luft

Hajos Z.

22. **Checking the fading of dyes, I.** (In English) Z. Hajós, J. Fodor. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 7, 1955, No. 1—2, pp. 117—132. 5 tabs.

2

Clem

The retarding of the fading of dyes was investigated in aqueous solutions (distilled water was used) in the alkaline *p*H range by ultraviolet irradiation using a substantive dye as model substance. It was found that six Naphthol AS derivatives of the examined eleven exhibited a definite inhibitory effect. According to the experimental findings the inhibitory effect of the compounds can to a large extent promote the hydroxy-naphthoic acid part of the molecule but the anilide part of the molecule can also play a decisive role. In the latter case especially the group attached to the ortho position as compared to the acid amide grouping deserves attention. The degree of fading was reduced by autoxidation inhibitors *e. g.* triceresyl phosphate, phosphoric acid, glucose, beta-naphthol, thiourea, quinol, pyrocatechol, resorcinol, monobenzylether of quinol, *etc.* It was found that the compounds Katanol ON, Naphthol AS-OL, Indanthrene olive-green B, *etc.* ordinarily used for the retarding of fading simultaneously inhibit the autoxidation of benzaldehyde as well. Therefore it seems reasonable to assume that a certain correlation exists between the autoxidation processes and the fading of dyes; the inhibitory mechanism may be similar or identical.

HAJOS, Z.

Hydrolysis catalyzed by ion-exchange resins. J. Foldor and Z. Hajós (Tech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 7, 133–48(1955)(in English); cf. *C.A.* 50, 4598g.—Investigations concerning the hydrolysis of sucrose were performed with Wolfatit KS resin, a cation-exchange type (phenol-sulfonic acid compn.). The catalyst was sepd. into 2 portions by the DIN series of sieves, the portion retained by the 0.6 sieve being discarded. The other portion was divided into 4 fractions, and these were treated as follows: I stirred at room temp. with 10% H_2SO_4 for 2 hrs., filtered, washed free of acid, and air dried; II pulverized so that it passed through a no. 2 sieve and treated like I; III ground so that it passed through a no. 1 sieve and activated as above; and IV ground on a Bloch-Rosetti mill for 20 hrs., then passed through a MOSz 110 sieve, and activated with H_2SO_4. The max. diams. and approx. surface areas relative to the particles of these catalysts, resp., were I 0.6 mm., 77 sq. cm./g.; II 0.2 mm., 228 sq. cm./g.; III 0.1 mm., 461 sq. cm./g.; and IV 0.05 mm., 920 sq. cm./g. Hydrolyses were performed with 100 ml. of a 20% sucrose

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2 M.A.YOUTS
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1/2

HYDROLYSIS CATALYZED ...

soln. in a 250-ml. 3-neck round-bottom flask equipped with a mech. stirrer, thermometer, and cooler. The rate of inversion was measured by the change in rotary power of a 1-ml. sample dild. with 9 ml. of 5% NaO_2Ac to prevent mutarotation. Values of α were measured at 24.5 ± 1°. With catalyst, II, 1% of vol. of soln., the mean value of k (reaction-rate const.) was 0 (25°), 2.38×10^{-4} (80°), and 8.95×10^{-4} (90°); k was directly proportional to the quantity of II and had a value of 2.10×10^{-3} at 80° when 8% was used. The mean value of k also increased with increasing particle size. The quantity and particle size of the catalyst present was directly proportional to the degree (%) of conversion and inversely proportional to the time required for completion of the reaction. Substituting 1 ml. 2.0N HCl as catalyst gave 89% conversion in 2 hrs. at 60° as compared with approx. 88% for 1% II at 60° in 1½ hrs. At 80° 1% of IV proved most effective with a mean value of $k = 9.55 \times 10^{-4}$, equil. being attained in 80 min. with 98.5% conversion. II was the least affective, $k = 2.38 \times 10^{-4}$ at this temp., requiring 210 min. for 96.2% conversion. I had the lowest conversion, 84.0%. The ΔE (E = energy of activation) was approx. 30% greater for the reaction in which HCl was used as catalyst than for the resin-catalyzed reaction. It appeared that ΔE rises initially, then at approx. 90° it decreases. Increasing the amt. of HCl present in the reaction mixt. had the same effect as increasing the amt. of II.

Reprint J. Polish

2/2

AM501 E

HUNGARY / Organic Chemistry. General and Theoretical Problems of Organic Chemistry. G-1

Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57317.

Author : Fodor J., Hajos Z.
Inst : Not given.
Title : Esterification Catalyzed by the Ion Exchange Resins.

Orig Pub: Magyar tud. adak. Kem. tud. oszl., 1956, 7, No 3-4, 299-312.

Abstract: The rate of reaction involving formation of dibutylphthalate from phthalic anhydride and n-butanol as affected by the concentration and quantity of ion exchange resin and of H_2SO_4 used as catalysts, was investigated. Formation of mono-esters goes to completion within 5-10 minutes. With the use of small quantities of catalyst, an "induction period" occurs prior to the formation of di-esters. The

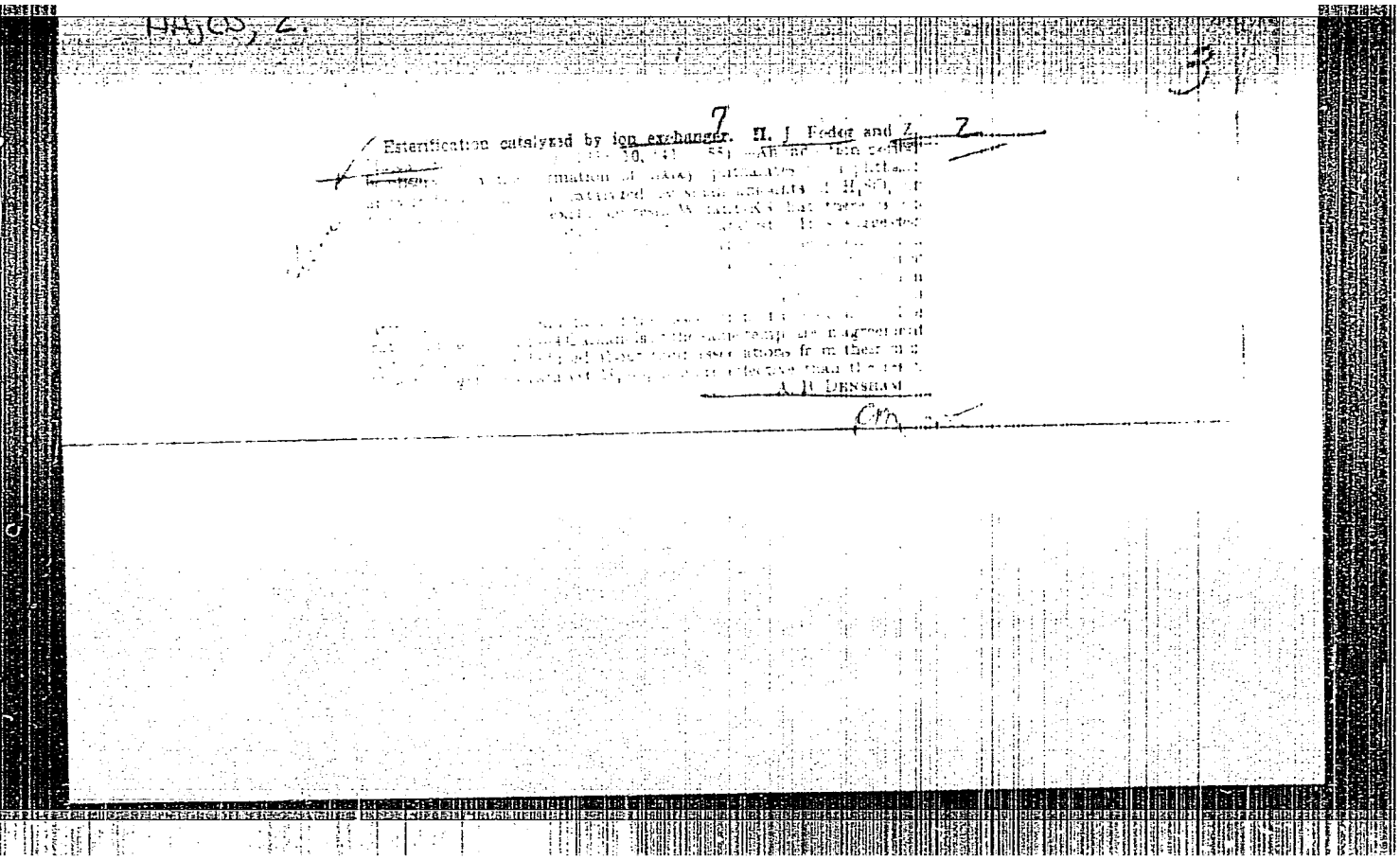
Card 1/3

HUNGARY / Organic Chemistry. General and Theoretical Problems of Organic Chemistry. G-1

Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57317.

Abstract: authors explain this phenomenon by a change of the degree of association (DA) of alcohol during the course of a reaction. Berman's investigation (Berman S and associates, Ind. and Eng. Chem., 1948, 40, 1312) is discussed and the process mechanism proposed by Berman is taken exception to. It is demonstrated that the reaction rate in obtaining dimethylphthalate increases rapidly with the increase of temperature which, evidently, causes the decrease in the DA of alcohol. At a relatively low temperature (60°) the di-esters hardly form. In order to determine the dependancy of the esterifi-

Card 2/3



Esterification catalyzed by ion exchanger. H. J. Fedor and Z.

A. R. DENSHAM

HAJOS, E.; VANA, V.

A delay-producing device for the TM-1694 synchroscope. p.24. (Sdelovaci Technika. Vol. 5, no. 1, Jan. 1957. Czechoslovakia.)

SO: Monthly List of East European Accession (EEAL) LC. Vol. 6, no. 7, July 1957. Uncl.

HUNGARY/Chemical Technology - Chemical Products and Their Application. Industrial Synthesis of Dyes. H.

Abs Jour : Ref Zhur - Khimia, No 10, 1959, 35971

Author : Hajos, Z., Fodor, J.
Inst :
Title : The Inhibition of Discoloration of Dyes. II.

Orig Pub : Magyar tud. akad. Kem. tud. oszt. kozl., 1957, 9, No 1, 1-8.

Abstract : The investigation of the discoloration of dyes, using benzopurpurin 4B as an example, is continued. It was established that the inhibitory action (i) of individual compounds of a number of naphthol AS at discoloration depends on the magnitude of their fluorescence (F) and the over-all absorption of the color (A) in the region of 2400-3900 A. It may be expressed by the equation: $i = j(F \times A)$ and conforms closely to a logarithmic function. The naphthol AS, in which the product F x A is equal to

Card 1/2

HAJOS, Zoltan, inz.

Measuring the distortion by differential gain and differential phase on video carrier frequencies. Slaboproudy obzor 25 no.9:534-536 S '64.

1. A.S. Popov Research Institute of Telecommunication Engineering, Prague.

HAJOS, Zoltan, inz.

Properties of high-level synchronous detection. El tech cas 15 no.10:625-632 '64.

1. A.S. Popov Research Institute, Prague.

HAJOS, Zoltan, Inz.

A phasemeter for the 0,1-6 Mc/s range. Slaboproudy obzor 21 no.3: 140-144 Mr '60. (EEAI 9:8)

1. Vyzkumny ustav pro sdelovaci techniku A.S.Popova, Praha.
(Phasemeters)

HAJOS, Zoltan, inz.

Selection of components for communication satellites. Sdel tech 11 no.8:299-300 Ag '63.

HAJOS, Zoltan, inz.

Influence of parasitic phase modulation in a video transmitter on the signal quality of NTSC color television. Slaboproudy obzor 24 no.4:209-213 Ap '63.

1. Vyzkumny ustav pro sdelovaci techniku A.S. Popova, Praha.

HAJOS, Zoltan, inz.

Linear transmitter without pre-emphasis. Sdel tech 12 no.2:55-56 F'64

L 00512-66 EWT(d)/FSS-2

ACCESSION NR: AP5023913 CZ/0039/64/025/009/0534/0536

AUTHOR: Hajos, Zoltan (Engineer)

TITLE: Measuring the distortion by differential gain and differential phase on video carrier frequencies

SOURCE: Slaboproudy obzor, v. 25, no. 9, 1964, 534-536

TOPIC TAGS: TV equipment, signal distortion, carrier frequency, electronic measurement

ABSTRACT: Described is a method of measuring the distortion in the TV transmitter, the R.F. part of the receiver, and the envelope detector. Also described is an instrument for measuring the distortion. Some particular features of the design and parameters attained are stated. Orig. art. has: 7 figures and 2 formulas.

ASSOCIATION: Vyzkumny ustav pro sdelovaci techniku A. S. Popova, Prague (Institute for Communication Engineering)

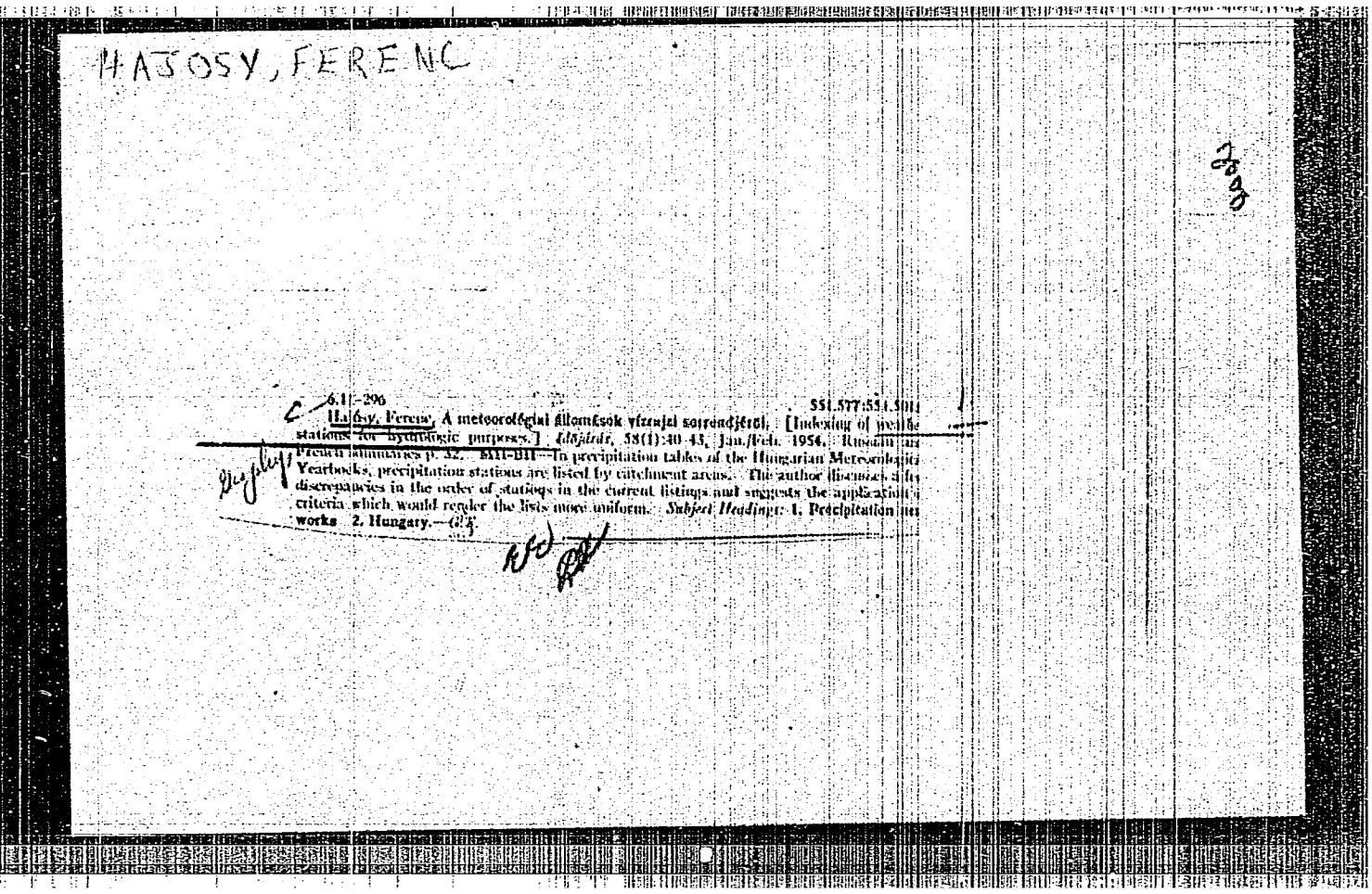
Card 1/2

L 00512-66

ACCESSION NR: AP5023913

SUBMITTED: 00	ENCL: 00	SUB CODE: EC
NR REF SOV: 000	OTHER: 000	JPRS

Card 2/2



HAJOSY, FERENC

6.1-296 551.577:551.501

Hajósy, Ferenc. A meteorológiai állomások vízrajzi sorrendjéről. [Indexing of weather stations for hydrologic purposes.] *Időjárás*, 58(1):40-43, Jan./Feb. 1954. Russian and French summaries p. 42. 8111-BIII—In precipitation tables of the Hungarian Meteorological Yearbooks, precipitation stations are listed by catchment areas. The author discusses the discrepancies in the order of stations in the current listings and suggests the application of criteria which would render the lists more uniform. *Subject Headings:* 1. Precipitation measurements 2. Hungary.—(EF)

HAJOS, A.

Data on rainfall conditions in the river basin of the Tisza; excerpts from a candidate's thesis, p. 305, Magyar Tudomanyos Akademia, Agrartudomanyok Ostalya, KOZLEMENYEI,Budapest, Vol. 9, No. 1/3, 1956

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 11, November 1956

HAJOSY, Ferenc, dr.

"Advection and radiation effect as reflected in the frequency of temperature anomalies in Hungary, 1871-1950" by Dr. Ferenc Simon. Reviewed by Dr. Ferenc Hajosy. Foldr kozl. 8 no.2:206-207 '60.

HAJOSY, Ferenc, dr.

Maximum values of daily temperature in Hungary. Orsz meteor int besa tud kut 26:209-219 '62(publ.'63).

HAJOSY, Ferenc

Data on the yearly formation of precipitation in the Carpathian region. Orsz meteor int besz tud kut 25:218-219 '61 (publ.'62).

HAJOSY, Ferenc, dr.

Climate of the Kisalfold. Foldr kozl 10 no.2:143-155 '62.

BAJCSY, Ferenc; TAKACS, Lajos

Combinations of the average hourly values of the temperature in Budapest and Debrecen. Idojaras 68 no.1: 26-32 Ja-F '64.

KOPPANY, Gy.; HILLE, Alfred; KAKAS, Jozsef; FUTO, Jozsef; KERI, Menyhert; PECZELY, Gyorgy; KOZMA, Bela; SZAPPANOS, Andras; AMBROZY, Pal; GOTZ, Gusztav; PAPP, Laszlo; BELL, Bela; MARTOS, Andras; BACSO, Nandor; HAJOSY, Ferenc; CSAPODY, Istvan; NAGY, Laszlo, igazgato foorvos; DONASZY, Erno; BORONKAI, Pal; ANTAL, Emanuel; TANCZER, Tibor; OZORAI, Zoltan

The 10th itinerant meeting of the Hungarian Meteorological Society in Sopron. Idojaras 68 no.4:249-250 Jl-Ag '64.

1. President, Hungarian Meteorological Society (for Hille). 2. Editor, "Idojaras" (for Kakas). 3. Editorial Board Member, "Idojaras", Budapest (for Ambrozy, Bell, Keri, Ozorai).

L 9852-66 FCC

ACC NR: AP6004040 SOURCE CODE: HU/0033/65/069/002/0083/0086

AUTHOR: Hajosy, Ferenc; Takacs, Lajos 44,55 44,55

ORG: none

TITLE: Combinations of the hourly mean values of the relative humidity in the cities of Budapest and Debrecen

SOURCE: Idojaras, v. 69, no. 2, 1965, 83-86

TOPIC TAGS: atmospheric humidity, meteorologic sampling 12,44,55

ABSTRACT: The relation between the mean value measured at standard times and the real daily mean was investigated. The maximum deviation of the monthly mean calculated from observations three times daily was approximately 1%. A more accurate mean value was given by using the data of four observations; however, from three hourly data the maximum deviation of the mean was only 0.2%. The examination of single days reveals that the deviation can sometimes be very large. It was concluded that if results accurate to within 1% are satisfactory there is no need for making any corrections. Orig. art. has: 1 figure, 1 table. [JPRS]

SUB CODE: 04 / SUBM DATE: none / ORIG REF: 003

Card 1/1

HAJOSI, Gyorgy; VADASZ, J.; GUBA, F.

Electron microscopical studies on cell cultures with modified preparative technic. Acta morph. hung. 4 no.4:545-549 1954.

1. Elektronenmikroskopische Abteilung des Institutes fur Messtechnic und Instrumentenkunde (Leiter F.Guba) der Ungarischen Akademie der Wissenschaften und Institut fur Histologie und Embryologie (Vorstand Prof. I. Toro) der Medizinischen Universitat, Budapest.
(ENDAMOEBA, culture
tissue culture, electron microscopy)
(MICROSCOPY, ELECTRON
of Endamoeba tissue culture on collodion membrane)

HAJÓSSI G., SZENTSSY K. AND GUBA F.

Elektronenmikrosk. Lab., Ungarische Akad. der Wissensch., Budapest. *Die elektronenmikroskopische Untersuchung der Protofibrillen des quergestreiften Muskels. Electron microscopy of the protofibrils of striated muscle ACTA PHYSIOL. ACAD. SCIENT. HUNG. (Budapest) 1954, 5/suppl. (17-18)

SO: EXCERPTA MEDICA, Section II Vol. 7 No. 11

HAJOSSI, GY.; GUBA, F.

Submicroscopic cell membrane of Endamoeba blattae Butschli. In German. p. 279. ACTA BIOLOGICA. (Magyar Tudomanyos Akademia) Budapest. Vol. 6, no. 3/4, 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 12, December 1956.

HORANYI, Bela; HAJOSSY, Gyorgyi

Submicroscopic structure of glia fibers. Magy. Tudom. Akad. Biol. Orv. Oszt. Kozl. 8 no.4:295-303 1957.

1. A Budapesti Ideggkortani Klinika es az MTA Elektronmikroszkopiai Laboratoriuma.

(NEUROGLIA, anat. & histol.
submicroscopic structure (Hun))

CZECHOSLOVAKIA

(2)

BAUDIS, P.; KOLOMAZNIK, M.; SEDIVEC, V.; PETEROVA, E.; JANOVSKY, F.; HAJNOVA, R.; Psychiatric Clinic, Medical Faculty, Charles University (Psychiatricka Klin. Lek. Fak. KU), Plzen.

"Treatment of Depression by Nialamide Infusions."

Prague, Activitas Nervosa Superior, Vol 8, No 4, Nov 66, pp 368 - 369

Abstract: Experiments in treating 22 patients with nialamide are described. In 8 patients there was an improvement, in 14 there was none. Where the depression was caused by agitation and anxiety, the drug had no effect. No side effects were observed, but the patients had to receive hypnotics at night to make them sleep. No EEG changes by the drug were observed. The use of Niamide at the present time is rather experimental than general. 1 Table, no references. Submitted at the 8th Annual Psychopharmacological Meeting at Jesenik, 18 - 22 Jan 66.

1/1

HAJOVSKY, A., inz.; STACHA, E., inz.

Expanding bolt head. Uhli 5 no.6:221 Je '63.

1. VVS-Hu, Prievidza (for Hajovsky). 2. Banske projekty (for Stacha).

HAJOVSKY, Ales, inz.

Development of mining methods in the coalfields of Slovakia.
Uhli 4 no.4:124-128 Ap '62.

1. Vyskumne a vyvojove stredisko, Prievidza.

HAJOVSKY, Ales, inz.

Experience with longwall mining of a thick seam in two sections at the Novaky lignite district. Uhli 5 no.4:122-126 Ap '63.

1. Vyskumne a vyvojove stredisko pre hnede uhlie, Prievidza.

HAJOVSKY, Ales, inz.

Supports of mine galleries in the thick seams of the Tertiary period. Uhli 5 no.8:273-275 Ag '63.

1. Vyzkumne a vyvojove stredisko pre hnede uhlie, Prievidza.

HAJPAL, Gyula

"Certain problems of the industrial development of economically undeveloped countries and their effect upon the international division of labor" by Z.Svejnar. Reviewed by Gyula Hajpal. Stat szemle 37 no.4:465-466 Ap '59.

HAJPAL, Gyula

"Questions relating to the determination and measurement of social product." Reviewed by Gyula Hajpal. Stat szemle 38 no.4:439-440 Ap '60.

HAJPAL, Gyula

"An attempt to determine the basic correlations in Poland's national economy" by Kazimierz Romaniuk. Reviewed by Gyula Hajpal. Stat szemle 38 no.4:444-445 Ap '60.

HAJPAL, Gyula

"An experiment to compare the economic levels of the Polish and Czechoslovak industries" by W.Iskra. Reviewed by Gyula Hajpal. Stat szemle 40 no.7:783-784 Jl '62.

HAJPAL, Gyula

"Labor productivity; some theoretical remarks" by Gyula Hajpal.
Stat szemle 40 no.12:1288-1289 D '62.

HAJPAL, Gyula

"A new period of investigating the efficiency of investments" by M. Rakowski. Reviewed by Gyula Hajpal. Stat szemle 40 no.12:1289-1290 D '62.

HAJPAL, Gyula

"Some methodological and organizational questions relating to household statistics" by J. Bezouka, J. Vytlacil (from "Statistika a kontrola," no.7, 1962). Reviewed by Gyula Hajpal. Stat szemle 41 no.3:325-326 Mr '63.

HAJPAL, Gyula, dr., foeloado

Certain methods for computing index numbers in Czechoslovak statistics. Stat szemle 42 no. 3:309-314 Mr '64.

1. Central Statistical Office, Budapest.